

REMARKS

Record of Substance of Examiner Interview

To the extent that it is required, this section of the response comprises applicants' separate record of the substance of the Examiner interview held by telephone on June 17, 2003. First of all, applicants thank the Examiner for the courtesy of extending the interview to applicants' representative. Consistent with the "Substance of Interview" accorded by the Examiner, applicants pointed out the main difference between the Griffin reference and the present invention. Griffin's invention is drawn to a filtration bag that is used for liquids. As a result, the article of Griffin cannot be waterproof. Applicants agreed to consider putting (and by this amendment has put) claim 3 into claim 1 to positively recite the limitation of a waterproof article. The last sentence in the Examiner's "Substance of Interview" warrants clarification. Applicants do believe that the present invention differs significantly from the disclosure of Effenberger et al. The reason is not just that the fibers of Effenberger are not expanded, however, but rather because the film element 12 (see, for example, Fig. 1 of Effenberger) is necessarily unexpanded (non-porous) PTFE, as opposed to the porous PTFE in the corresponding part of the present invention.

Applicants provide more discussion of these points in the remarks below.

Confirmation of Election

Applicants hereby confirm election of group 1, claims 1-21 without traverse. Claim 22 has been cancelled without prejudice for pursuit in a divisional application.

Claim Objections

Claims 1, 2, 10, 19, and 21 stand objected to because of the use of "PTFE" and "THV" as acronyms. Applicants have amended these claims to spell out the acronyms for clarification purposes as suggested in the Official Action.

Obviousness Rejections

Claims 1-21 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Griffin (U.S. Patent No. 6,517,919) in view of Sahatjian et al. (U.S. Patent 4,943,473) or Effenberger et al. (U.S. Patent No. 5,357,726). Griffin is directed to a laminant and pulse jet filter bag. The filter bag disclosed in Griffin is intended to be used in both dry filter applications and liquid filter applications. Column 2, lines 33-35 of Griffin. Accordingly, the gas or liquid being filtered must pass through the filter. This filter thus cannot be waterproof, or else it would be inoperable.

More specifically, the porous expanded PTFE membrane 16 (Fig. 1 of Griffin) is described at column 3, lines 22-33, to have an air permeability of at least 0.1 cubic feet per meter per square foot at 0.5 inch water gauge. The reference goes on to state, "Preferably, the membranes for use in liquid stream applications have an air permeability of between about 0.01 and about 7 cfm/ft²." Column 3, lines 31-33. At this level of air permeability, liquid passes through the membrane, which is necessary for the functionality of the device. Griffin goes on to describe a woven fabric that can be attached to the porous membrane in order to reduce stress on the membrane but "without sacrificing air permeability features." Column 3, lines 63-64. Although Griffin generally teaches that the membrane and the woven fabric can be bonded together using a conventional adhesive such as a fluorinated polymer adhesive (column 5, lines 1-4), the reference does not give specifics about how this bonding is to be accomplished. Applicants submit that it is likely to be spot bonding, but in any event, the reference is clear that the bonding is accomplished "without sacrificing air permeability features." Thus, the product described in Griffin is not waterproof, certainly not as defined in the present specification, and would be inoperable if in fact it were waterproof. Applicants have specifically amended claim 1 and claim 21 to define this waterproof feature of the present invention more clearly.

By contrast, both Sahatjian and Effenberger are directed to laminated composites intended to prevent liquid passage. Sahatjian is directed to fire and chemical resistant composites made from flexible substrates and fluoropolymer-containing films used as protective garments and other articles. The fluoropolymer film is preferably polytetrafluoroethylene (PTFE). Column 2, lines

57-58. Significantly, this is not disclosed to be a porous or expanded PTFE. The purpose of the PTFE layer in Sahatjian is to protect the underlying fabric to which it is bonded from chemical attack. The solid PTFE film does this, as reported in the break-through tests in Sahatjian. Because a porous or expanded PTFE film would not adequately resist chemical attack, use of a porous or expanded PTFE film in the composites of Sahatjian would render them inoperable.

Effenberger is directed to composite materials for structural end uses. The fabric disclosed by Effenberger is preferably glass fibers, which are subject to attack from the elements, particularly liquid water. See column 2, lines 28-35. To protect the fabric, Effenberger suggests bonding to a hydrophobic protective film such as PTFE. The PTFE resists water penetration and protects the underlying fabric, as discussed at column 6, line 34ff in Effenberger. Any porosity or liquid penetration of the protective film would defeat the purpose of the article disclosed by Effenberger.

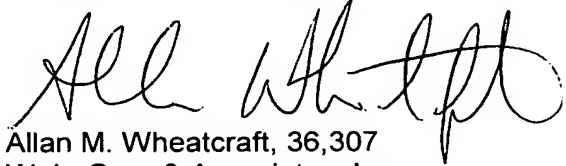
Accordingly, because the device of Griffin must allow water to pass through it, and the composites of Sahatjian and Effenberger are specifically intended to prevent such water ingress, it is improper to combine Griffin with either of those references. The teachings of the references teach away from such combination, and any such combination would render at least one of the devices inoperable. Thus, a prima facie case of obviousness cannot be established by the combination of such disclosures. Applicants respectfully request reconsideration of the amended claims.

With regard to the disclosure of Effenberger in particular, the only PTFE disclosed as the hydrophobic protective film element 12 (Fig. 1) is PTFE "preformed by a variety of known techniques such as melt extrusion, melt casting, skiving and paste extrusion." Significantly, no porous PTFE is disclosed as being useful for hydrophobic protective film element 12. Applicants claim the use of porous PTFE. The porous PTFE provides significant advantages for architectural fabric applications, such as added strength and flexibility, as well as durability. See page 4, lines 29-30 of the present specification. There is no need nor suggestion for porous PTFE to be used as the hydrophobic film layer in Effenberger. In fact, use of such porous PTFE in the structure of Effenberger may defeat the protective purposes intended to be met by the composite

disclosed therein. Accordingly, the present invention provides distinct advantages not found or suggested in Effenberger.

Accordingly, in light of the foregoing amendments and remarks, applicants respectfully submit that the claims of the present application are in condition for allowance, which action is respectfully requested.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Allan M. Wheatcraft', written in a cursive style.

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